










METHOD FOR MAKING AlSiMgCu ALLOY PRODUCTS HAVING ENHANCED INTERCRYSTALLINE CORROSION RESISTANCE

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Abstract of WO9612829

A method for making high-strength rolled or extruded AlSiMgCu aluminium alloy products desensitised to intercrystalline corrosion, comprising a step of casting a plate or billet having the following composition: Si 0.7-1.3 %, Mg 0.6-1.1 %, Cu 0.5-1.1 %, Mn 0.3-0.8 %, Zr < 0.20 %, Fe < 0.30 %, Zn < 1 %, Ag < 1 %, Cr < 0.25 %, others < 0.05 % each and < 0.15 % in all, with the balance being aluminium and Mg/Si < 1; a homogenising step at 470-570 DEG C; a hot and optionally cold working step; solution treatment at 540-570 DEG C; a hardening step; and a tempering step including at least one temperature plateau at 120-250 DEG C, preferably 165-220 DEG C, the overall process length measured in equivalent time at 175 DEG C being 30-300 hours. A product having the composition given above and a conductivity, when desensitised to intercrystalline corrosion, at least 0.5 MS/m higher than in state T6, is also disclosed. Such products are particularly suitably for making structural members for aircraft fuselages or rail or road vehicles.

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